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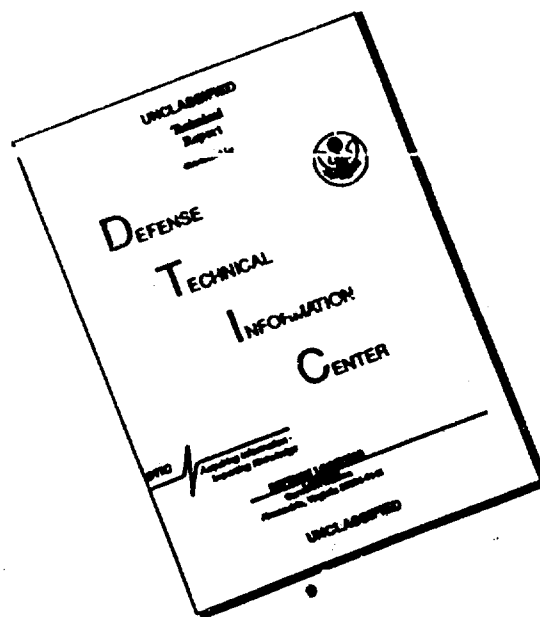
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Neuropathology and Psychiatry, 16(1); 47-49, 1947

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Therapy of Japanese Encephalitis.

The therapy of Japanese encephalitis is one ^{of} the weakest links in the study of this disease, here and in other countries. This is understandable from the pathogenesis of the disease.

A severe neuroviral infection of the character of capillaro-toxicosis with the predominant affection of the central nervous system in the brain region, such as Japanese encephalitis, demands other methods of treatment and other approaches. The successful solution to this problem is the application of pathogenetic mediums of treatment in the earliest possible period of infection.

Unfortunately, the unclarity of the clinical chart, presence of numerous other infections in this epidemic period and in some cases insufficient knowledge of the disease by the doctors led to a late entrance of the patient into the hospital.

Thus, in one hospital the records of deaths indicate that 75% of the patients entered the hospital on the 3-4th day and even the 5th. This could not possibly aid in the effectiveness of the treatment, and in the specific serotherapy. It is believed that serum therapy, seeking the virus, is not satisfactory, and some times unsuitable.

One of the first methods of treatment of neuro-infections is the lumbar puncture. This method was surmised to have two benefits: one- release of the harmful substances from the organism, two- the mechanism lowers the high intracranial pressure, present in many neuro-infections.

At the present time we consider this method of releasing the pressure proper, but too much liquid must not be released. We analysed the

reports of 66 deaths, all having had lumbar punctures at various periods of infection. Data indicate that death resulted on that same day, or the next day. Reports indicated that no results were obtained from punctures made on the 1st and 2nd day of illness.

Punctures on the 3rd day of illness resulted in one death the 2nd day after puncture. Of the 8 survivors, 4 had a temperature drop the next day, the remaining in later periods. Punctures on the 4th day (9 patients) gave 4 deaths that same day, three the next and one later.

Punctures on the 5th day (14 patients) brought 7 deaths; one on the day of puncture, 3 the day after and 2 after 2 days, one after 3. The temperature dropped in the 7 surviving patients on the 4th day or later. Punctures on the 6th day brought temperature drops on the 5-6th day after, and in three cases, on the 3rd day.

Of the punctures on the 7th day, the temperature dropped after 2 days in one case; in the remaining patients it dropped after 5 days.

Punctures on the 8th day gave death in one case after 2 days. The temperature dropped in 2 cases after 3 days, and in one case much later.

Thus, the lumbar punctures, along with other symptomatic mediums, brought a lowering of the temperature in the three days following the puncture in only 15% of the cases, we had 25% mortality which was predominantly on the next day after puncture.

We also must state that the punctures were one time, with the extraction of small quantities of fluid. With multiple punctures or larger extractions the results would have been worst. Evidently there is a great change in the intracranial pressure, present during this disease, which affects the patients.

Thus, we recommend the use of the punctures only as a relief of the intracranial pressure during convalescence.

In our studies we encountered many patients treated with endolumbar injections of 0.8% streptocides in quantities of 10 cm³. The unsatisfactory use of sulphamides for Japanese encephalitis was proven in the Primorsk in the past years. Our reports indicate that of 17 patients receiving streptocides, 11 died that day or the next.

The injections of streptocides gave no quick or great decrease of the temperature. The results were from 3-8 days after injection. Also, the injections raised the mortality rate to 65%.

The use of any endolumbar injection seems useless, due, mainly, to the reverse pressure of the edema of the brain, not allowing the discirculation of the injection in that direction.

Tests were made in 1943 in the Primorsk on the use of suboccipital punctures during the outbreak of Japanese encephalitis.

Studies at the Kraskinsk hospital, using the suboccipital puncture in treatment, as well as treatment without it, showed no great differences. The treatment without the puncture gave a very slightly lower mortality rate.

In the epidemic of this year, using the suboccipital puncture, the death rate was 40% of those patients receiving it. Of 11 patients two died that same day, 5 the next day, the remaining 4 died in later periods.

The above patients entered the hospital late, that is, on the 5-6th day of illness, but, considering the virus to be in the blood, it would have been better to give intramuscular and intravenous injections of serum to combat the virus in the blood stream.

We also are uncertain of the use of daily suboccipital punctures: some patients received daily punctures for 3 to 4 days. Evidently, the frequent variation of the intracranial pressure is harmful to the patient. Of the survivors, only 5 patients had severe courses, the other had mild courses, which could have abated without the punctures.

Thus, studies of the outbreaks of this year cannot conclusively indicate the effectiveness of the suboccipital punctures.

In the 1943 Far East conference we considered the use of urotropine contraindicated, particularly with the complications of hemorrhagic cystitis, nephritis, etc.

Thus, the cardinal method of treatment of Japanese encephalitis remains, at the present time, the use of serum therapy, used in the first days of infection with other symptomatic measures, already reported by N. I. Grashchenkov.

In closing I would like to suggest the maintenance of proper quarters (bedding, ventilation, sunshine, etc.) and sufficient personnel to properly administer the therapy and care of the patients.